

Title (en)

LOW-OBLIQUITY PUPIL RELAY FOR NEAR-EYE DISPLAY

Title (de)

PUPILLENRELAIS MIT GERINGER ABWEICHUNG FÜR AUGENNAHE ANZEIGE

Title (fr)

RELAIS DE PUPILLE À FAIBLE OBLIQUITÉ POUR AFFICHAGE PROCHE DE L'ŒIL

Publication

EP 4038423 A1 20220810 (EN)

Application

EP 20772501 A 20200902

Priority

- US 201916592163 A 20191003
- US 2020049072 W 20200902

Abstract (en)

[origin: US2021103140A1] A beam scanner for a near-eye display includes a beam-folded pupil relay configured for receiving a light beam reflected from a tiltable reflector and relaying the light beam to an exit pupil while preserving the beam angle of the reflected beam. The beam-folding pupil relay includes a beamsplitter, e.g. a polarization beam splitter configured to redirect the beam to a curved reflector, which sends the beam towards the exit pupil. Polarization of the light beam reflected from the curved reflector may be changed to an orthogonal polarization by a waveplate disposed in an optical path of the light beam between the polarization beam splitter and the curved reflector, enabling the reflected light beam to propagate through the polarization beam splitter towards the exit pupil. A pupil-replicating waveguide may be disposed proximate the exit pupil. A 2D tiltable reflector or a pair of 1D tiltable reflectors may be used.

IPC 8 full level

G02B 5/10 (2006.01); **G02B 17/08** (2006.01); **G02B 26/08** (2006.01); **G02B 26/10** (2006.01); **G02B 27/00** (2006.01); **G02B 27/01** (2006.01)

CPC (source: CN EP US)

G01S 7/4817 (2013.01 - CN US); **G02B 5/10** (2013.01 - EP); **G02B 17/08** (2013.01 - CN); **G02B 17/0856** (2013.01 - EP); **G02B 26/08** (2013.01 - CN); **G02B 26/0833** (2013.01 - EP); **G02B 26/10** (2013.01 - CN); **G02B 26/101** (2013.01 - EP); **G02B 26/123** (2013.01 - CN US); **G02B 27/0081** (2013.01 - CN EP); **G02B 27/0172** (2013.01 - CN EP US); **G02B 27/283** (2013.01 - CN US); **G02B 17/023** (2013.01 - US); **G02B 26/101** (2013.01 - US); **G02B 26/126** (2013.01 - US); **G03B 21/28** (2013.01 - US)

Citation (search report)

See references of WO 2021066992A1

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

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BA ME

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